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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,980	12/15/2003	Ramadas Lakshmikanth Pai	15137US02	4226
23446	7590	08/26/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			BORKOWSKI, ROBERT	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/735,980	Applicant(s) PAI ET AL.	
	Examiner Robert Borkowski	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RD

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The serial number and the filing date of the related Patent Application are missing (paragraph 0002).

Appropriate correction is required.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

"MPEG formatting of video data 305" (paragraph 0018 line 2),

"pixels 315" (see paragraph 0018 line 5),

"a packetized elementary sequence 360" (paragraph 0019 lines 13-14),

“a transport header 365a” (paragraph 0019 lines 14-15).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

“Video Playback Processor 400” (Figure 2),

“SPDIF Generator 470” (Figure 2),

“CIRCUITRY 550” (Fig. 4),

element “560” (Fig. 4),

“PREPARE NEXT BATCH 735” (Fig. 5).

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 3, 9, 10, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Stohs (U.S. Patent No. 4,704,641).

6. As to claims 1 and 9, Stohs teaches a method for providing a plurality of sequential data words (Abstract), said method comprising:

receiving a command (column 7 lines 16-25, Fig.1 element 108) to provide the plurality of sequential data words, the plurality of sequential data words comprises a first data word and a last data word, and one or more data words between the first data word and the last data word (column 5 lines 13-28, Fig. 2 element 203);

fetching a sequential portion of the sequential data words (column 6 lines 18-35), said sequential portion comprising a first intermediate word, the last word, and one or more data words between the intermediate word and the last word (column 5 lines 13-28, Fig. 2 element 203);

storing (column 6 lines 35-55, Fig. 3 element 305) the sequential portion;

transmitting at least a portion of the last data word (column 9 lines 36-41); and transmitting at least a portion of the intermediate data words after transmitting at least the portion of the last data word (column 9 lines 36-41).

7. As to claims 2 and 10, Stohs teaches fetching another sequential portion of the sequential data words (column 6 lines 56-68, Fig. 3 elements 303-306), the another sequential portion comprising a second intermediate data word, immediately followed one or more data words, immediately followed by a third intermediate data word, the third intermediate data word immediately preceding the first intermediate word (column 6 lines 56-68, Fig. 3 elements 303-306);

storing the another sequential portion (column 6 lines 56-68, Fig. 3 elements 303-306);

transmitting at least a portion of the third intermediate word; and transmitting at least a portion of the second intermediate word after transmitting at least the portion of the third intermediate word (column 9 lines 36-41).

8. As to claims 3 and 11, Stohs teaches storing the sequential portion in a memory, the memory having a beginning address and an ending address, and wherein at least the portion of the last data word is stored at the ending address and wherein at least the

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portion of the first intermediate word is stored in the beginning address (column 7 line 56 thru column 8 line 6, Fig. 6 element 111).

9. As to claims 7 and 15, Stohs teaches wherein the one or more data words comprise a predetermined number of data words (column 5 lines 13-28, Fig. 2 element 203).

10. As to claims 4 and 12, Stohs teaches wherein the memory is characterized by a width, and the data words are characterized by a width, the width of the memory being smaller than the width of the data words (column 6 lines 56-68, Fig. 6 element s 401a and 401z).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stohs (U.S. Patent No. 4,704,641) in view of Katsavounidis et al. (U.S. Patent No. 6,876,705).

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12. As to claims 8 and 16, Stohs does not teach wherein the plurality of sequential data words stores a video packet.

However, Katsavounidis et al. teaches a circuit adapted to recover useful data from a video packet that is at last partially corrupted (column 2 lines 44-60, column 3 lines 9-38, Fig. 7A, 7B elements 700, and 720)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stohs to include wherein the plurality of sequential data words store a video packet.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stohs by the teaching of Katsavounidis et al., because decoding of a package in both the forward and the backward direction can be used to locate a position of an error (column 2 lines 28-43).

13. As to claim 17, Stohs teaches a system comprising:

a compressed data buffer comprising a plurality of sequential data words (column 6 lines 35-55, Fig.2 element 111, Fig. 3 element 305);

a direct memory access engine (column 4 lines 34-41, Fig. 1 element 104) comprising:

a state logic machine for receiving a command (column 7 lines 16-25, Fig.1 element 108) to provide the plurality of sequential data words and a control signal indicating reverse order (column 7 lines 16-25, Fig. 1 element 105), wherein the plurality sequential data words comprises first data word and a last data word, and one or more

data words between the first data word and the last data word (column 5 lines 13-28, Fig. 2 element 203);

a memory controller for fetching (column 6 lines 18-35) a sequential portion of the sequential data words, said sequential portion comprising a first intermediate word, the last word, and one or more data words between the intermediate word and the last word (column 5 lines 13-28, Fig. 2 element 203);

a local buffer (Fig. 1 element 111) for storing the sequential portion; and
a port transmitting (column 9 lines 36-41) at least portion the last data word.

However, Stohs is silent on a video decoder for decoding the video packet.

Katsavounidis et al. teaches a video decoder (Abstract, column 19 lines 43-50, column 20 lines 13-39) for decoding the video packet (column 2 lines 44-61, Fig. 7A and 7B elements 700 and 720).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply the teaching of both Stohs and Katsavounidis et al. to include a video decoder for decoding the video packet. Decoding of a packet in both the forward direction and the backward direction would allow locating a position of an error (column 2 lines 28-44).

Transmitting at least a portion the intermediate data words after transmitting at least the portion of the last data word is of the same scope as that of claims 6 and 14, thus rejected under the same rationale.

The plurality of sequential data words for storing a video packet is of the same scope as that of claims 8 and 16, thus rejected under the same rationale.

14. Claims 5, 6, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stohs (U.S. Patent No. 4,704,641) in view of Boothroyd et al. (U.S. Patent No. 4,608,633).

15. As to claims 5 and 13, Stohs is silent wherein the last data word comprises at least the portion of the last data word and at least another portion, wherein at least the portion comprises the least significant bits of the last data word, and wherein the at least another portion comprises the most significant bits of the last data word, and wherein storing the portion further comprises:

storing the at least another portion of the last data word at an address preceding the ending address.

However, Boothroyd et al., teaches operand data loaded into stack A 330 and stack B 331 (Fig. 12A) comprising at least the portion of the last data word and at least another portion (column 12 lines 10-51, column 13 lines 32-50, Fig. 12A elements 330, 331). And storing the at least another portion of the last data word at an address preceding the ending address (Fig. 12A elements 330, 331).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stohs to include wherein the last data word comprises at least the portion of the last data word and at least another portion, wherein at least the portion comprises the least significant digit of the last data

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word, and wherein the at least another portion comprises the most significant digit of the last data word (Fig. 12A). Storing the at least another portion of the last data word at an address preceding the ending address (Fig. 12A elements 330, 331).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stohs by the teaching of Boothroyd et al., because having the at least the portion of the last data word and at least another portion (column 12 lines 10-51) would allow a method for reading operand data stored in a temporary storage memory in a forward or reverse direction, wherein the operand data can be multiple variable length operands (column 1 lines 44-50).

16. As to claims 5 and 13, Stohs is silent wherein transmitting the at least another portion of the last word after transmitting at least the portion of the last word.

However, Boothroyd et al., teaches read the data out least significant digit first (column 13 line 51 thru column 14 line 26).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Stohs by the teaching of Boothroyd et al., because by reading the data out least significant digit first would allow execution to start without having to wait for the entire operand data read to be completed and help in speeding up the execution time of the instruction (column 1 line 51 thru column 2 line 2).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,949,240 Ijima.

U.S. Patent No. 5,644,784 Peek.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Borkowski whose telephone number is 571-272-8626. The examiner can normally be reached on Monday - Friday 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Borkowski
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TAMMARA PEYTON
PRIMARY EXAMINER



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